

We Claim:

1. A CMP slurry comprising a liquid, abrasive particles and a selectivity enhancer comprising a nucleic acid related compound.
2. The CMP slurry of claim 1, wherein the liquid is water and the slurry contains at about 0.01 wt.% abrasive particles.
3. The slurry of claim 2, wherein the nucleic acid related compound is RNA or DNA, a nitrogen-containing precursor of RNA or DNA, a nitrogen-containing decomposition product of RNA or DNA, or mixture of any of these compounds.
4. The slurry of claim 3, wherein the nucleic acid related compound is RNA or DNA.
5. The slurry of claim 3, wherein the nucleic acid related compound is a nucleotide.
6. The slurry of claim 5, wherein the nucleotide is adenosine 5'-phosphate, 2'-deoxyadenosine 5'-phosphate, guanosine 5'-phosphate, 2'-deoxyguanosine 5'-phosphate, cytidine 5'-phosphate, 2'-deoxycytidine 5'-phosphate, uridine 5'-phosphate, 2'-deoxythymidine 5'-phosphate, adenosine 5'-diphosphate, 2'-deoxyadenosine 5'-diphosphate, guanosine 5'-diphosphate, 2'-deoxyguanosine 5'-diphosphate, cytidine 5'-diphosphate, 2'-deoxycytidine 5'-diphosphate, uridine 5'-diphosphate, 2'-deoxythymidine 5'-diphosphate, adenosine 5'-triphosphate, 2'-deoxyadenosine 5'-triphosphate, guanosine 5'-triphosphate, 2'-deoxyguanosine 5'-triphosphate, cytidine 5'-triphosphate, 2'-deoxycytidine 5'-triphosphate, uridine 5'-triphosphate, 2'-deoxythymidine 5'-triphosphate, or mixtures thereof.
7. The slurry of claim 3, wherein the nucleic acid compound is a nucleoside.
8. The slurry of claim 7, wherein the nucleoside is adenosine, 2'-deoxyadenosine, guanosine, 2'-deoxyguanosine, cytidine, 2'-deoxycytidine, uridine, 2'-deoxythymidine or mixtures thereof.
9. The slurry of claim 3, wherein the nucleic acid related compound is adenine, guanine, cytosine, uracil, thymine or mixtures thereof.
10. The slurry of claim 3, wherein the slurry contains a mixture of a cationic surfactant, an anionic surfactant and a nonionic surfactant.
11. The slurry of claim 10,

wherein the cationic surfactant is an alkyltrimethylammonium halide, an alkylbenzyltrimethylammonium halide, a pyridiniumalkyl halide, an alkylammonium ester, or mixtures thereof,

wherein the anionic surfactant is a polymer containing carboxylic acid groups, an ammonium, sodium, potassium, cesium, monoethanolamine, diethanolamine, or triethanolamine salt of such a polymer, or mixtures thereof, and

wherein the nonionic surfactant is a water soluble polyvinyl alcohol, polyacrylamide, polyvinylpyrrolidone, or mixtures thereof.

12. The slurry of claim 11, wherein the cationic surfactant is hexadecyltrimethylammonium bromide, hexadecylbenzyltrimethylammonium bromide, dodecylbenzyltrimethylammonium bromide, cetylpyridinium chloride, dodecylammonium acetate, or mixtures thereof.

13. The slurry of claim 1, wherein the nucleic acid related compound is a mixture of uridine and cytidine.

14. A chemical-mechanical polishing process for selectively removing silicon dioxide from the surface of a workpiece containing surface areas of silicon dioxide and surface areas of silicon nitride in which the surface to be polished is contacted with a polishing pad and a CMP slurry is applied to the interface between the polishing pad the surface to be polished,

wherein the CMP slurry comprises a liquid, abrasive particles and a selectivity enhancer for enhancing the removal of silicon dioxide in preference to the removal of silicon nitride, the selectivity enhancer comprising a nucleic acid related compound.

15. The process of claim 14, wherein the liquid comprises water and the slurry contains at about 0.01 wt.% abrasive particles.

16. The process of claim 15, wherein the nucleic acid related compound is RNA or DNA, a nitrogen-containing precursor of RNA or DNA, a nitrogen-containing decomposition product of RNA or DNA, or mixture of any of these compounds.

17. The process of claim 16, wherein the nucleic acid related compound comprises RNA or DNA.

18. The process of claim 17, wherein the nucleic acid related compound comprises a nucleotide.

19. The process of claim 16, wherein the nucleic acid related compound comprises a nucleoside.

20. The process of claim 16, wherein the nucleic acid related compound comprises adenine, guanine, cytosine, uracil, thymine or mixtures thereof.

21. The process of claim 16, wherein the nucleic acid related compound is a mixture of uridine and cytidine.